

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A blood purification device comprising:
 - a blood circuit having an arterial blood circuit and a venous blood circuit;
 - a blood pump disposed in said arterial blood circuit;
 - a blood purifier connected to the blood circuit between said arterial blood circuit and said venous blood circuit, and configured to purify blood flowing in said blood circuit;
 - a first measuring unit disposed in said arterial blood circuit and configured to measure a first hematocrit value Hta ~~blood concentration~~ of said arterial blood circuit;
 - a second measuring unit disposed in said venous blood circuit and configured to measure a second hematocrit value Htv ~~blood concentration~~ of said venous blood circuit;
 - a calculating unit to first obtain a measured ratio value and a theoretical ratio value and then compare said measured ratio value to said theoretic ratio value to obtain an evaluation value which can be used to evaluate operation of the blood purification device ; wherein the first measured hematocrit value Hta is divided by the second hematocrit value Htv to obtain the measured ratio value Hta/Htv; and a preset blood flow rate Qb is divided by a preset water removal rate Quf to obtain the theoretical ratio value Qb/Quf configured to calculate a first measurement value and a first theoretical value, said first measurement value referring to a ratio of said blood concentrations measured by said first measuring unit and said second measuring unit, and said first theoretical value referring to a blood concentration ratio obtained by at least one formula based on parameters including a preset blood flow rate of said blood pump and a preset blood purifying rate of said blood purifier;
 - an evaluation unit coupled ~~configured~~ to evaluate whether the evaluation value ~~a difference between said first measurement value and said first theoretical value~~ is larger than a first predetermined acceptable ratio difference; and

said ~~ealeulation~~ calculating unit is further configured to calculate a second measurement value and a second theoretical value, said second measurement value referring to a ratio of said blood concentrations measured by said first measuring unit and said second measuring unit while said blood pump is operated at said adjusted blood flow rate and said blood purifier is operated at said preset blood purifying rate, and said second theoretical value referring to a blood concentration ratio obtained by at least one formula based on parameters including said adjusted blood flow rate of said blood pump and said preset blood purifying rate of said blood purifier;

said evaluation unit is further configured to evaluate whether said difference between said second measurement value and said second theoretical value indicates a trouble condition is larger than a second predetermined acceptable ratio difference; and

said reporting unit is further configured to report the trouble condition for said blood purifier when said difference between said second measurement value and said second theoretical value is at a first value which is different larger than the second predetermined acceptable ratio difference, and to report the trouble condition for said blood pump when said difference between said second measurement value and second ~~first~~ theoretical value is at a second value which is different not larger than the second predetermined acceptable ratio difference.

9. (Withdrawn) A method for monitoring for a trouble condition associated with a blood purification device, the method comprising the steps of:

disposing a blood pump in an arterial blood circuit of said blood purification device;

connecting a blood purifier between said arterial blood circuit and a venous blood circuit to the blood purification device, said blood purifier being configured to purify blood flowing in said blood circuit;

measuring a blood concentration of said arterial blood circuit;

measuring a blood concentration of said venous blood circuit;

